

- Wheeler, Marshall R., 1949. Taxonomic studies on the Drosophilidae. Univ. Texas Public. 4920: 157-195.
- Wheeler, Marshall R., Haruo Takada, and Danko Brncic, 1962. The *flavopilosa* species group of *Drosophila*. Univ. Texas Public. 6205: 395-414.

---

## TWO NEW GENERA OF DOLICHOPODIDAE FROM MEXICO (DIPTERA)

HAROLD ROBINSON, *Dept. of Botany, Smithsonian Institution*

During recent trips to Mexico, numerous undescribed species of the family Dolichopodidae were collected. Among these were representatives of the following previously undescribed genera.

The concave occiput, apical arista, lack of acrostichals and of preapical setae on the femora place both genera in the Medeterinae close to the European genus *Cyrturella* Collin. *Microcyrtura* is distinct in the generally dark setae, the broadened clypeus, the very elongate arista, and the form of the third vein of the wing. *Microchrysotus* has the clypeus narrow and the arista shorter as in *Cyrturella*, but the curved fourth vein and fuscous band of the wing and the male palpus and fore tarsus are distinctive.

### *Microcyrtura*, gen. nov.

Small, metallic dark green or dull black, setae mostly dark. Face of the male narrow in the middle, broad above and below, without setae, covered with silvery-white pollen; first antennal segment bare above, second segment truncate apically, arista apical and very elongate; occiput strongly concave. Thorax strongly arched with the posterior slope flattened; acrostichals absent, five pairs of dorsocentrals, a pair of long scutellars, proepisternum bare above. Femora without preapicals. Second wing vein extending only twice as far as the first vein, ending far short of the tip of the third vein; third vein parallel with the fourth beyond the posterior crossvein, curving and converging with the fourth vein near the tip, more widely separated in the female; fourth vein ending at the apex of the wing; posterior crossvein shorter than the last section of the fifth vein; sixth vein lacking. Abdomen slightly tapering, mostly rather straight; hypopygium small, sessile, extending forward under the tip of the abdomen.

Type species, *Microcyrtura campsicnemoides* sp. n.

The species are found on rather dry rock surfaces. Each of the four species known from Mexico has a distinctive distribution.

1. Legs pale; male with a series of prominent anterodorsals and a very long posterodorsal on the middle tibia; hypopygium without prominent lamellae ..... 2

- Legs dark, brown or yellowish-brown; male without distinctive setae on the middle tibia; hypopygium with long rather densely pubescent apical lamellae..... 3
2. Fore basitarsus of the male not broader distally, posterodorsal of the middle tibia rather erect, inserted before the first of the anterodorsal series (San Luis Potosi, Hidalgo).....*M. campsicnemoides*
- Fore basitarsus of the male broadened distally, posterodorsal of the middle tibia nearly appressed, usually inserted by the first of the anterodorsal series (Guerrero, Chiapas).....*M. metatarsalis*
3. Second joint of hind tarsus distinctly longer than the first; front bearing some rather yellowish pollen; male with prominent setae on the fore tibia and tarsus; hypopygial lamella slender, dark (Oaxaca).....*M. oaxacensis*
- First two joints of hind tarsus of about equal length; front with prominent silvery-white pollen; fore leg without prominent setae; hypopygial lamella broad, whitish (Puebla).....*M. lamellata*

***Microcyrtura campsicnemoides* sp. n.**

(Figs. 1, 2)

Male.—Length 1.0 mm.; wing 1.1 mm. by 0.4 mm.

Face narrow in the middle, broadened above, with a marked suture below which the clypeus is broadened; front broad with diverging sides, becoming very broad above; face and front covered with silvery-white pollen. Palpus and proboscis brown with small brownish hairs. Antenna black, basal two segments very short; second segment ringed with small black setulae; third segment conical, covered with fine pale hairs; arista short-pubescent, as long as the head and thorax combined; lower orbits with a row of fine rather pale hairs.

Thorax dark metallic green, dulled with yellowish-brown pollen on the anterior mesoscutum, with thick whitish pollen on the flattened posterior slope, grayish pollen on the pleura.

Middle and hind coxae except the tips and the base of the fore coxa infuscated; fore and middle coxae with sparse pale hairs and a few larger setae on the anterior surface, middle coxa with a large pale seta toward the outer margin, hind coxa with a smaller pale external seta. Hind femur except the extreme base, upper surface of the middle and sometimes the fore femur, hind tarsus from the tip of the first joint, and the distal joints of other tarsi brownish, remainder of legs usually including all trochanters yellow; bristles black but hairs mostly pale; rows of slender erect setae along the antero- and posteroventral margins of the fore femur, two or three erect slender anteroventral setae on the middle femur near the base; fore and hind tibiae without distinctive setae; middle tibia with an anterodorsal bristle near the basal third followed by a series of about fourteen erect brown setae, one posterodorsal near the basal fourth which is half as long as the length of the tibia, apicals small, indistinct. Lengths of the joints of the fore tarsus from the base as 7-3-2-2-3; middle tarsus as 9-4-3-2-3; hind tarsus as 5-5-3-2-3; distal joints of all tarsi slightly widened.

Wing rather elongate-oval, clear with brownish veins, anal angle rather rudimentary. Margin of the calypter, its hairs, and the knob of the halter black, stem of the halter often pale.

Abdomen about as long as the thorax, rather dull black, with only short dark hairs. Hypopygium brownish, small, extending forward under the tip of the abdomen, with an angle on the lower surface and a few short appendages at the tip, with a small flange on each side above the tip.

Female face nearly as broad in the middle as below; without evident row of erect setae on the anterodorsal surface of the middle tibia, posterodorsal of the middle tibia much shorter; anal angle of wing slightly more prominent.

Holotype male, allotype female, and six male paratypes, from limestone face near seepage above roadside spring, just north of Chapulhuacan, Hidalgo, Mexico, Aug. 5 and 13, 1962; three male and three female

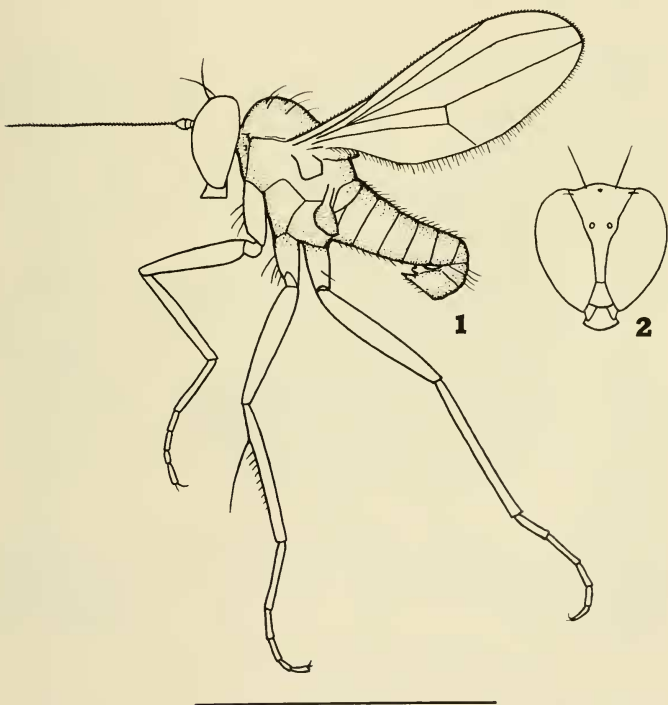


Fig. 1-2. *Microcyrtura campsiencmoides* sp. n., male, line represents 1 mm.; Fig. 2, showing anterior view of head slightly more enlarged.

paratypes, from limestone surfaces near moisture in small ravine, a few miles south of Tamazunchale, San Luis Potosi, Mexico, Aug. 4 and 5, 1962; all collected by the author. Holotype and allotype in the U. S. National Museum (USNM type no. 67060), two males and one female at the Instituto de Biología, Ciudad Universitaria, Mexico, D. F., others in the author's collection.

The species resembles the genus *Campsicnemus* of the Campsicneminae in the shape of the face and in having a modified middle tibia.

***Microcyrtura metatarsalis* sp. n.**

(Fig. 4)

Male.—Length 1.2 mm.; wing 1.3 mm. by 0.5 mm.

Head, thorax, and wing as in *M. campsicnemoides*.

Bases of middle and hind coxae, upper edge of hind femur, and distal joints of tarsi somewhat darkened, legs otherwise pale; setae rather pale, only largest setae dark. Middle femur with two or three slender erect anteroventrals near the base, hind femur with one or two rather prominent anteroventrals near the tip; fore and hind tibiae without distinct setae, middle tibia with a series of about seventeen erect anterodorsals from near the base to the tip, longest one near the base and usually paired with a very long nearly appressed posterodorsal. Lengths of joints of the fore tarsus from the base as 10-3-3-2-4, mostly darkened, metatarsus slightly compressed especially in the distal half and with two or three short erect dark setae posteriorly at the tip; middle tarsus as 12-5-4-3-4; hind tarsus as 8-7-5-3-4; distal joints of all tarsi slightly widened.

Hypopygium brown, short, curling forward under the tip of the abdomen, with a pair of apical prongs projecting upward toward the abdominal venter.

Female apparently indistinguishable from that of *M. campsicnemoides*.

Holotype male and one male paratype, from rather dry rock surface in shaded ravine near Tierra Colorada, Guerrero, Mexico, May 29, 1963; allotype female, six male and eight female paratypes, from rocks in shaded roadside ravine, sierra above Arriaga, Chiapas, Mexico, May 21-22, 1963. Holotype and allotype in U. S. National Museum (USNM type no. 67122), two males and two females at the Instituto de Biología, Ciudad Universitaria, Mexico, D. F., others in the author's collection.

The species is very closely related to the preceding but differs in the form of the fore metatarsus and the hypopygium. The large posterodorsal of the middle tibia is usually distinctive also in its insertion and in being nearly appressed so as to touch the tips of the row of anterodorsals.

***Microcyrtura oaxacensis* sp. n.**

(Fig. 5)

Male.—Length 1.3-1.5 mm.; wing 1.5 mm. by 0.6 mm.

Head and thorax very similar to *M. campsicnemoides*, but the front usually bears

partly yellowish or brownish pollen.

Legs pale brownish; setae mostly dark. Fore femur with a series of slender posterodorsals prominent near the tip, middle femur with one or two erect slender ventral setae near the base, hind femur with a row of erect fine setae along the ventral margin; fore tibia with a series of rather stout setae along the posterodorsal surface, longer setae distally, series continued on the metatarsus, middle tibia with a very small anterodorsal and posterodorsal near the basal third, hind tibia without distinctive setae. Lengths of joints of the fore tarsus from the base as 10-5-4-3-4, metatarsus with four strong posterodorsals of which the second is usually longest, series continued on second joint with shorter setae, two or three ventrals near base of the metatarsus; middle tarsus as 13-8-5-3-3; hind tarsus as 8-10-6-4-4.

Wing usually brownish tinged, shape and venation as in *M. campsiencnoides*.

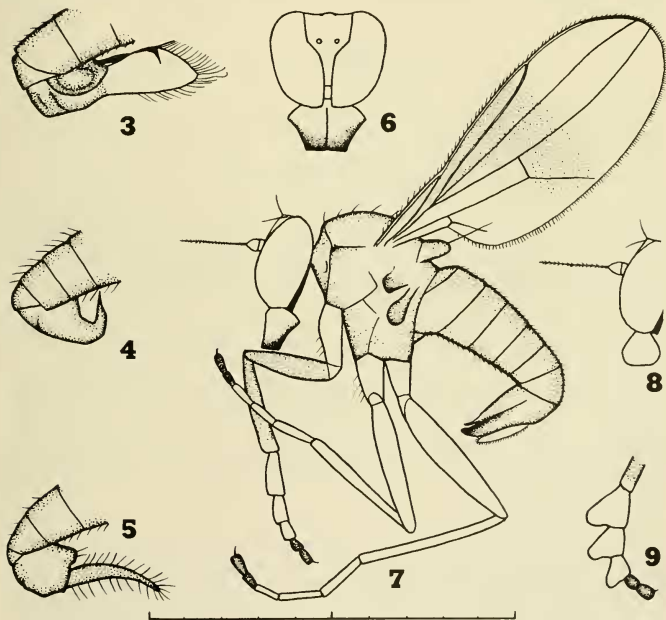


Fig. 3-9. *Microcyrtura* and *Microchrysotus*, males, line represents 1 mm.; Fig. 3. *Microcyrtura lamellata* sp. n., genitalia; 4. *M. metatarsalis* sp. n., genitalia; 5. *M. oaracensis* sp. n., genitalia; 6-7. *Microchrysotus mirabilis* sp. n., 6. showing anterior view of head; 8-9. *M. tarsalis* sp. n., 8. head with palpus, 9. fore tarsus.

Hypopygium small, brown, rather globose with a pair of long tapering brown lamellae bearing numerous short hairs.

Female face nearly as wide in the middle as below; fore and hind legs without distinctive setae, middle tibia with the anterodorsal and posterodorsal much longer than in the male; anal angle of wing more prominent.

Holotype male, allotype female, thirteen male and eighteen female paratypes, from rock surfaces in shaded ravines and on shaded culverts, along rt. 175 on sierra above Valle Nacional, Oaxaca, Mexico, May 13-16, 1963. Holotype and allotype in U. S. National Museum (USNM type no. 67123), two males and two females in the Instituto de Biología, Ciudad Universitaria, Mexico, D. F., others in the author's collection.

As in *M. lamellata* the hypopygial lamellae are apparently projections of the capsule and are not articulated at the base.

*Microcyrtura lamellata* sp. n.

(Fig. 3)

Male.—Length 1.5 mm.; wing 1.5 mm. by 0.6 mm.

Head and thorax essentially as in *M. campsicnemoides* with silvery-white pollen very prominent on the front.

Legs dark, coxae and femora with greenish tinges and dulled with slight whitish pollen, trochanters, tibiae, and basal joints of the tarsi pale brownish; setae mostly rather pale. Fore and hind femora with a series of short erect setae along the anteroventral surface, middle femur with usually three slender erect ventral setae near the base; fore and hind tibiae without distinctive setae, middle tibia with a small black antero- and posterodorsal near the basal fourth. Lengths of joints of the fore tarsus from the base as 7-4-3-2-3; middle tarsus as 9-5-3-2-3; hind tarsus as 6-6-4-3-3.

Wing mostly clear, oblong with anal angle prominent, venation as in *M. campsicnemoides*.

Hypopygium small, black, smooth near the base; lamella large, oval, whitish with pale marginal setae; inner margin indurated, black, ending in a short incurved black tooth.

Female face nearly as wide in the middle as below; femora without erect ventral setae, antero- and posterodorsal of middle tibia larger than in the male; anal angle of wing as in the male.

Holotype male, allotype female, seven male and eight female paratypes, on rocks by stream in deep shaded gorge by old road west of San Martín, Puebla, Mexico, May 27, 1963. Holotype and allotype in U. S. National Museum (USNM type no. 67124), two males and two females at the Instituto de Biología, Ciudad Universitaria, Mexico, D.F., others in author's collection.

The species is generally larger than others of the genus and was the only one occurring in a generally arid and elevated region.

**Microchrysotus**, gen. nov.

Small, rather dull brownish or black ornamented with ochre and white portions; larger setae dark. Eyes nearly contiguous below in the male, approximated in the female, face dark with brownish pollen, without setae; palpi much enlarged in the male; first and second segments of the antenna short and truncate, first bare above, arista apical, slightly longer than the face; occiput strongly concave. Thorax slightly arched, not distinctly flattened posteriorly; acrostichals absent, five pairs of dorsocentrals, one pair of scutellars, proepisternum bare above. Femora without preapicals; fore tarsus mostly white, compressed in the male. Wing clear with a median fuscous band; second vein extending only two-thirds the wing length, curving forward distally and ending in a slight sinus; third and fourth veins distinctly convergent distally, fourth bending forward in the last part; posterior crossvein about half as long as the last of the fifth; sixth vein represented by a weak fold. Abdomen slightly tapering; hypopygium short, sessile, extending forward under the tip of the abdomen.

Type species, *Microchrysotus mirabilis* sp. n.

The species were found primarily on leaves. A few specimens were on adjacent moist rock.

**Microchrysotus mirabilis** sp. n.

(Figs. 6, 7)

Male.—Length 0.9 mm.; wing 1.0 mm. by 0.4 mm.

Face very narrow from slightly below the antennae, greenish with thick brownish-yellow pollen; front broad, only a little broader above. Palpus broadly triangular with the tip truncate, yellowish with the tip usually violet; proboscis small, brownish-yellow. Antenna yellow with the tip of the third joint slightly darkened. Lower orbit with a row of pale hairs.

Thorax dark; mesonotum metallic green mostly dulled by thick ochre pollen. A few pale hairs above the fore coxa.

Fore coxa, tip of fore tibia, first to third joints of fore tarsus whitish; femur, most of tibia, and last two tarsal joints dark; middle and hind legs pale with last two tarsal joints dark. Lengths of joints of fore tarsus from the base as 8-6-4-3-4, first three joints slightly but distinctly compressed; middle tarsus as 6-5-5-3-4; hind tarsus as 10-8-5-3-5.

Wing rather oblong-oval. Calypter dark with very short dark hairs, halter light brown.

Abdomen slightly longer than thorax, rather dull black, with only short dark hairs. Hypopygium yellowish-brown, darker toward the tip, elongate rather pale short-pubescent lamellae against the lower surface.

Female face slightly wider, clypeus prominent; palpus small, brown; mesonotum without ochraceous pollen; abdomen rather compressed and truncate.

Holotype male, allotype female, three male and six female paratypes, from foliage and moist rock in small roadside ditch, near 95 km. marker on rt. 175, Sierra Juarez above Valle Nacional, Oaxaca, Mexico, May

17, 1963. Holotype and allotype in U. S. National Museum (USNM type no. 67125), one male and one female at the Instituto de Biología, Ciudad Universitaria, Mexico, D. F., others in the author's collection.

Both sexes were observed to hold their ornamented front legs outward and slowly wave them back and forth in a manner reminiscent of many Ephyrdrids.

***Microchrysotus tarsalis* sp. n.**

(Figs. 8, 9)

Male.—Length 0.8 mm.; wing 1.0 mm. by 0.4 mm.

Very similar to *M. mirabilis*, showing only three observed differences. Palpus enlarged, rather rounded, pale yellow; mesonotum metallic green dulled with yellowish pollen, without thick ochraceous pollen; fore tarsus with first three joints strongly compressed, triangular, as wide as long.

Female apparently not distinguishable from that of *M. mirabilis*.

Holotype male, from foliage in small roadside ditch, near 95 km. marker on rt. 175, Sierra Juarez above Valle Nacional, Oaxaca, Mexico, May 17, 1963, in U. S. National Museum (USNM type no. 67126).

Lacking evident distinctions all females collected were assigned to *M. mirabilis*.

---

**BOOK REVIEW**

**Practical Entomology**, by R. L. E. Ford. Frederick Warne & Co., Inc., 101 Fifth Ave., New York 3, N.Y. ix + 198 pp. 1963. \$4.95.

This work, one of the *Wayside and Woodland* series, presents methods and techniques for collecting, rearing, and preserving insects by the novice. Many excellent suggestions concerning specific habitats for finding various stages of British insects, especially Lepidoptera, are given. Rearing of Lepidoptera is discussed in some detail. And, means of rearing or maintaining colonies of bumblebees, wasps, and ants for observation and study are illustrated.

The author indicates that short (less than 38 mm.) insect pins are preferable to long ones. Workers over the world, with the exception of the British, use the long pins. Fortunately, specimens on short pins can be double mounted. Brass pins should never be used, contrary to the author's statement. Eventually, verdigris forms, ruining the specimen. Japanned steel or stainless steel pins should be used for all in cets.—RONALD W. HODGES, Entomology Research Division, U.S.D.A., Washington, D. C.